

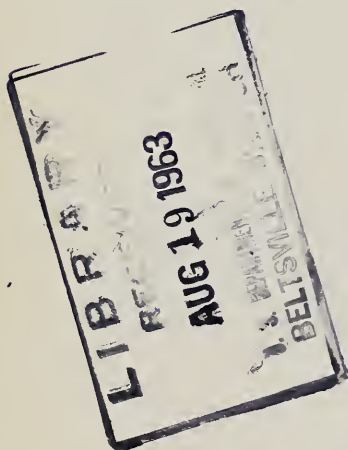
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AUGUST 1963



EGGS—Grade Does
Not Mean Size—Page 5





Volume 8, Number 8

ORVILLE L. FREEMAN
Secretary of Agriculture

S. R. SMITH, Administrator,
Agricultural Marketing Service

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August 1963

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Cover Page

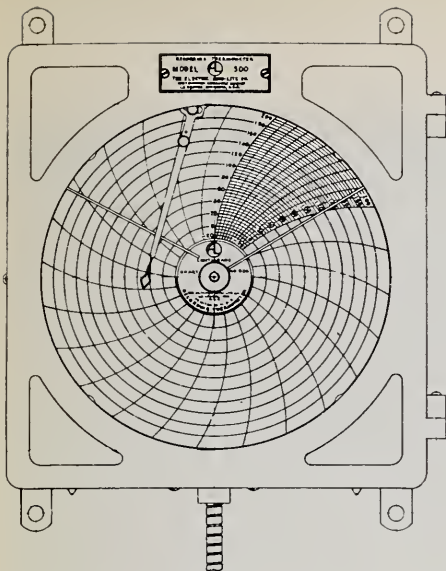
Cathy Keay, needless to say, is impressed by the size of the egg. The bigger they come, the better she likes them. In Cathy's world, the biggest egg means the best you can buy. But to marketing specialists in USDA's Agricultural Marketing Service, size and quality are quite different things. A big egg can be of the highest or lowest quality. And so can a small egg.

When Cathy's mother shops for eggs, she is mostly concerned with good quality. She wants eggs of reliable quality that she can count on week after week. She gets this assurance when she buys eggs by USDA grades, which are official certifications of quality.

Editor, MILTON HOFFMAN
Assistant editor, JAMES A. HORTON

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Top Quality Fresh Produce Depends On

Good Shipping Practices

By Howard B. Johnson

TOP-QUALITY fresh fruits and vegetables are an excellent bargain for consumers today. Even more fresh fruits and vegetables could qualify as top-quality bargains than now do—and at the same time increase returns to grower-shippers—if greater care were used in protecting the harvest-fresh quality of the products during transit.

A growing quantity of lower quality produce has been traced to overloading of railcars and “piggyback” trailers. Overloading has been encouraged by the lower per-package shipping charges that have become available in the last few years for heavy loading—up to 30,000 to 42,000 pounds per trailer and 50,000 pounds per railcar. In too many instances, loads have been packed so solidly that refrigeration does not reach the produce, and the quality deteriorates.

These undesirable results need not be. The grower-shipper can have his cake and eat it, too, and benefit from both the low rates and good refrigeration to keep his produce in top condition. Marketing researchers in the USDA’s Agricultural Marketing Service have conducted a number of shipping studies to help growers and shippers determine the best loading methods to insure proper refrigeration for various commodities.

The most recent study shows the results of improper loading of typical commercial shipments of heavy “incentive rate” loads. Twelve of the 13 shipments studied did not have adequate refrigeration because they were too solidly packed. Even though some of the best refrigeration equipment was used, the cold air could not reach the center of the loads in 12 of the shipments.

The 13th shipment, which, like all the rest, qualified for heavy “incentive rates” was loaded so that cold air would circulate through the load. The produce—tomatoes, in this case—soon



This shipment of grapefruit was properly cooled when loaded this way.

reached the temperature set on the thermostat, and stayed at that temperature throughout the 700-mile trip. This was the only heavy load with proper refrigeration.

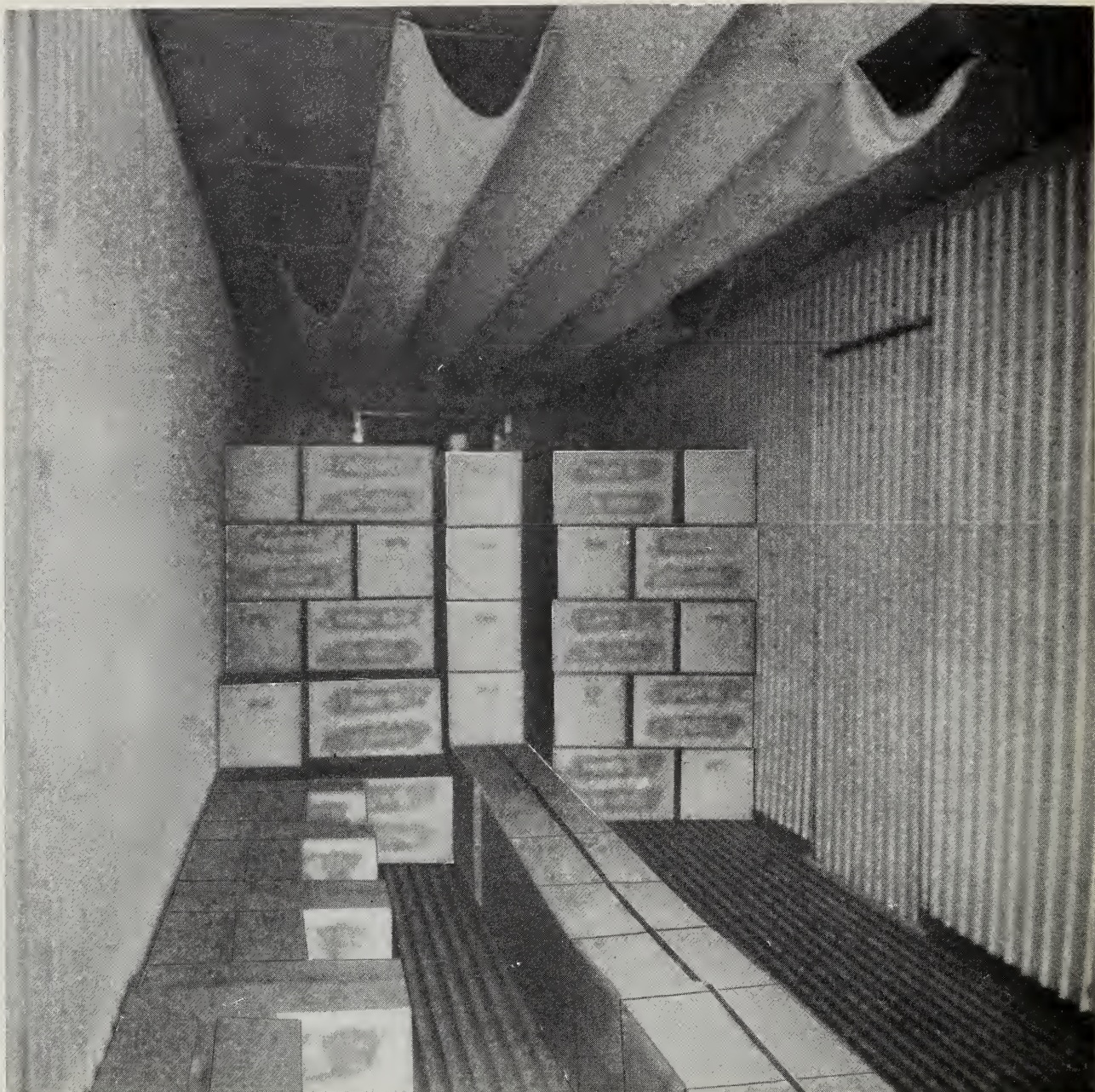
Some of the other shipments never reached the desired temperature until the end of the trip, and then only a small part of the load was cooled to the proper temperature. Some produce varied as much as 15 degrees above the thermostat setting.

The test shipments were made with carrots, onions, tomatoes, grapefruit, and oranges in “piggyback” trailers over a distance of 700 to 1,000 miles. Additional shipments were made over a greater distance by shipboard trailers carrying grapefruit from Texas to New York metropolitan markets. Although all the shipments originated in Texas,

the same kind of “incentive rates”—and loading problems—apply in many other regions throughout the country.

In one instance, the temperature of some grapefruit went down as low as 28 degrees, and freezing damage resulted. Other sections of the same load of grapefruit were not cool enough. Again, poor air circulation resulting from overloading caused these temperature differences. Similar situations have occurred with vacuum-cooled lettuce, according to a number of reports not included in this study.

All of these circulation problems can be overcome by using one of several loading patterns recommended by marketing researchers. For example, in a 6-layer load, cartons should be placed to leave air channels in four lower layers, with the two top layers



Ineffective cooling resulted when this loading pattern was used in recent test shipments.

loaded solid. Instead, in one test shipment, the four top layers were loaded solid. As a result, the solid layers received inadequate refrigeration.

Marketing researchers caution that a chimney loading pattern usually won't satisfy temperature requirements for good cooling in a trailer load and even a channel load is unsatisfactory unless properly loaded. Air flow can be short-circuited with either kind of loading pattern when there's inadequate air space under the floor rack.

Low outdoor temperatures can also penetrate a trailer's walls and interfere with good refrigeration if continuous fan operation is not provided. If the

thermostat reflects the low outside temperature, it may shut off the refrigeration unit for most of the trip, resulting in uneven refrigeration of the load, or possibly warming of the center of the load during the course of the trip.

A loading pattern that works well in railcars may not be satisfactory for trailers, according to earlier tests. The refrigeration unit may be too far from the distant end of the load in a trailer for the blower to furnish adequate air circulation, because a loading pattern designed for rail refrigerator cars usually depends on the use of cooling systems at each end of the car.

Complete details for a recommended loading pattern for trailers with a forward bulkhead, and other factors that affect good refrigeration during transit are given in Marketing Research Report No. 589, "Truck-Rail and Sea-Land Shipping Tests With Texas Fruits and Vegetables." Additional recommendations are given in Agriculture Handbook No. 195, for rail shipments, and AMS-470 and AMS-482 for truck shipments. Free copies of these publications can be obtained from the *Editor, Agricultural Marketing*, AMS, USDA.

(The author is a staff member of the *Market Quality Research Division*, AMS, stationed at Harlingen, Texas.)

EGGS

Grade Does Not Mean Size

“**L**ook at those big eggs! They must be the very best you can buy.”

Have you ever heard anyone say this, or have you thought this yourself? If so, you were confusing egg **SIZE** with egg **QUALITY**. They are quite different things. A big egg can be of lowest or highest quality. And so can a small egg.

The U.S. Department of Agriculture's Agricultural Marketing Service has set up official terms both for egg quality and egg size, which are widely used all over the country. There are six different official sizes of eggs, each with its own exact range of weights per dozen. Egg size alone tells nothing about quality, however. To tell quality or freshness, USDA has set up three grades (Grade C has just been eliminated) to cover the range of eggs acceptable for consumer use.

The USDA shield means that the eggs in the carton have been officially checked for quality and weight by trained graders under the supervision of the U.S. Department of Agriculture. In the shield are the letters, “USDA” across the top, and just under this is the letter grade denoting the quality level. The size is often included in the shield. The grade and size may be printed on the carton also.

The grade marks, which denote quality of freshness, are Fresh Fancy Quality or AA, A, and B. Grade AA or Fresh Fancy is the highest quality. Grade A is also of top quality. Grade B eggs are still good, nutritious eggs, but not as high quality as Grades AA, Fresh Fancy, or A. Eggs grades can be revealed by the candling method or by the break-out test. Grades AA or Fresh Fancy and A both have thick, high whites and firm yolks. The whites of Grade A spread out a little more than Grade AA. Both these grades are best for frying, poaching or soft-cooking in the shell—where appearance is important.

Grade B has wide-spreading whites, and flattish yolks. It is good for scrambling, omelets, in baking, mixed with other foods, for thickening custards, pie fillings, sauces and salad dressings—where appearance is not important.

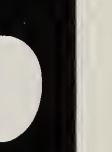
These grade marks may be either stamped or printed on top of the carton, or printed on the tape used to seal the front of the carton. On some packs of very fine eggs, you may see the words, “Fresh Fancy Quality” inside the USDA shield. These eggs are produced under a special quality-control program supervised by USDA.

The six official USDA size classes of eggs are based on weight per dozen. From largest to smallest, they are Jumbo, Extra Large, Large, Medium, Small and Peewee. Those sizes which you will most often find in retail stores are Extra Large, Large, and Medium.

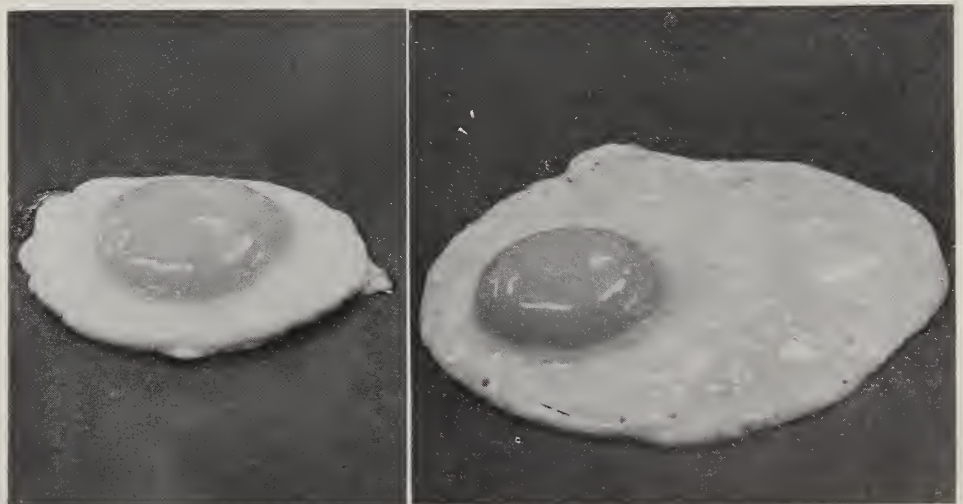
The Extra Large eggs must average 27 ounces to the dozen or more; the Large, 24 ounces or more per dozen; and Medium, 21 ounces or more per dozen.

Buy any *size* that suits you, but be sure they are also of the *grade* you want. Remember that the top grades, AA and A, are best for use where appearance is important. Grade B, which costs less, is adequate where the eggs are mixed together, scrambled, for omelets, baking, etc. All grades have virtually the same nutritional value. Remember also that size alone does not indicate quality, and that grade alone does not indicate size.

Consider Weight

JUMBO	EXTRA LARGE	LARGE	MEDIUM	SMALL	PEEWEE
					
30 oz.	27 oz.	24 oz.	21 oz.	18 oz.	15 oz.

Consider Quality



Fresh Fancy or AA Quality

Grade B

In two articles that begin with this issue Harold F. Breimyer describes some of the policy issues in marketing that are being faced today. Mr. Breimyer, economist to the Administrator, Agricultural Marketing Service, is on a year's leave of absence serving on the University of Illinois staff.

Issues Of The Day In Marketing

From nursery rhyme—

"To market, to market, to buy a fat pig . . ."

"Simple Simon met a pieman, going to the fair . . ."

"Jack Sprat could eat no fat . . ."

To august language of the Court—

"Unfair trade practices and monopolistic methods which . . . destroy competition, restrain trade, and create monopoly have never . . . resulted in benefit to the public interest"

Marketing enters into day-to-day affairs.

The jingles tell us something about marketing in Old England. Simon's "fair" was not of balloons, merry-go-rounds and livestock judging. It was a town market. His fair-market, as every 3-year-old knows, had rules of trading that permitted no credit. Jack Sprat and wife already were conscious of fatness-vs.-leanness in meat.

In the adult world of today, marketing is still on most persons' tongues.

Nearly everyone spends part of his time buying and selling. He gives much thought and care to it.

Farm products and food are high on the list of commodities that are traded. Farmers, for example, are sensitive to the kind of markets open to them when they sell their products. They find their economic welfare to be tied up in the marketing process.

Sometimes the marketing transaction itself is a brief moment of drama. A hog producer's six months' profits may rest on the minutes during which his animals are bid off to a packer. For the tobacco farmer, a year's reward may be at stake in the few seconds of an auctioneer's chant. The TV cattleman's suspense as to whether the rustlers will be caught is no keener than the real-life cattleman's concern as to whether his shipment to Omaha brings 24, 26, or 28 cents per pound.

Likewise, market prices that are vital returns to farmers are equally important costs to market agencies.

Marketing of farm products has several unique features. These set it off from other kinds of markets in the economy. They go far to explain the

complex system that has come into being by which farm products are transferred from producer to successive market agents, and prices are arrived at.

Among those characteristics are the following:

1. The time span between the decision to produce farm products, and their farm-gate marketing. The production interval may be brief, as in broilers; of intermediate length, as in most annual crops; or very long, as for beef cattle raising and tree fruits.

Whatever the length, the time interval creates uncertainty in agricultural production and marketing. When the farmer chooses what and how much to produce, he must guess the price he will receive when the output is sold. Errors in those guesses are a source of instability in production, prices, and incomes for farm products.

Equally important, due to the time interval between decisions for production and marketing, the farmer's willingness (or unwillingness) to produce has little or no bearing on the price for which he can negotiate when he sells.

In much of industry an order is

filled only if the price is satisfactory, or production is speeded or curtailed according to the rate of current sales. In agriculture, by contrast, the "order" is usually filled first and price-making is a separate process that comes two to fifty months later.

2. Perishability of many farm products. The more perishable a food, the greater is the urgency that it be sold and therefore the weaker the seller's bargaining position in selling it. This is a universal rule. A number of farm products are perishable indeed. For some of them, the perishability continues through several stages in marketing.

3. The smallness of each farmer. As is well known, U.S. agriculture still conforms to the competitive "ideal" of many small producers, each without market power. By and large, the market firms to which farmers sell are larger. There are many merits to small-farm agriculture, but it denies the individual farmer much bargaining strength when he sells his products.

Nevertheless, it would be erroneous and unfair to make any blanket statement as to the competitiveness of markets for farm products. Some are highly competitive. Yet in the total marketing system from farm to consumers, the clear trend has been to larger sized firms, many of which possess considerable market power.

Moreover, much competition among market agencies has come to be not the exclusively price competition that is typical of little businesses. Instead it often is the peculiar kind of contest which takes place between giants—it may include much non-price competition, as in promotion, advertising, trading-stamp bonuses, brand-name rivalries, and others. Some of these lead to built-in merchandising costs without clear evidence of commensurate benefit.

Latest area to become marked by huge size of firm is food retailing. Chains, and various voluntary and cooperative associations of independent stores, now dominate the food retailing field.

4. Variability and unpredictability. Farm products, unlike industrial, cannot be produced to exact order. As products of nature they cannot be turned out according to clockwork timing and blue-print specification. So, despite effort and progress toward standardization, they remain variable in quantity, quality, and timing of output.

Unfortunately, this feature of farm

products is sharply in conflict with the demand of consumers and processors for a regular supply of products of standardized quality.

5. Remoteness of farmer from the consumer. The farmer once produced products that were nearly or fully ready for consumption. He may himself have distributed them directly. Nowadays, fewer farm products are sold in a form for consumption. More servicing and processing are interposed between farm and consumers.

Farmers in 1962 received 38 cents of the dollar consumers spent for food. From each consumer dollar for all farm products the farm return is even less—in 1958 (when last calculated) it was only 27 cents. Of the 1958 all-product dollar, 66 cents went to the marketing system and 7 cents to excise taxes (chiefly on tobacco and alcoholic beverages).

The wider gulf between farmer and consumer has significance to price-making for farm products. It means that the level of prices at the farm is less directly affected by consumer demand. It is influenced more than formerly by the workings of the marketing system itself.

Traditional and Modern Markets

One conclusion from the features of the marketing of farm products is that individual farmers, unaided, are not in a strong bargaining position in marketing. This does not necessarily mean that they are treated unfairly. It does mean that farmers are highly subject to the make-up of the markets to which they sell.

The traditional idea of a good market for farm products is a lineal descendant of Simple Simon's fair—it is a market where many buyers and sellers come together to exchange goods. This is the idea of a central market. Its growth in the U.S. during the last century was favored by the rise of railroad transportation. Railroad lines reached out radially from big cities and brought products together to central terminal markets. Similarly, when a new form of transportation, the motor truck, came on the scene it had much to do with decentralization of markets.

The idea of central exchange markets still dominates much thinking about marketing. It is a common "mental point of reference." Also, most government services in marketing, such as market news, were initially designed to

accompany central market trading.

Nevertheless, decentralization of markets is not the radical change in marketing as is sometimes supposed. The reason is that the automobile, telegraph and telephone have made it possible for local-market or direct selling to be almost as competitive as terminal market selling. Country points are themselves knitted together much closer than formerly. Certainly the cattle feeder selling direct in Colorado is nearly as well informed and in about as good a bargaining position as the Illinois feeder who ships to Chicago.

More important than changes in physical location of marketing have been the new developments in the way the marketing and price-making process is carried on. Modern marketing departs in manifold ways from the traditional concept.

Significantly, most of the changes arose out of efforts to correct for some of the weaknesses inherent in the several features of farm-product marketing named above.

Modern departures in systems of marketing and market pricing for farm products include:

1. Delivery of fluid milk under Federal orders. Currently 83 orders are in force. Some States have additional provisions relative to marketing or pricing of milk.

2. Marketing agreements and orders for fresh fruits and vegetables. There are 45.

3. Support prices for several crops and for manufacturing milk. These establish an optional market and minimum prices.

4. Contractual marketing. This is found in broilers, cattle, canning crops, and many other products.

5. Bargaining associations. These are most common for processing crops.

6. Cooperative marketing. This takes many forms. It may range from providing mere technical efficiency in marketing to wielding sizable market power.

7. Attempts to negotiate delivery prices. The new National Farmer's Organization is pursuing this goal. The American Farm Bureau Federation has set up a subsidiary organization that is hoping to strengthen farmers' bargaining power in marketing certain products.

And so the system by which farm products move into and through marketing channels is a diverse one. It is a mosaic. Moreover, as time passes it becomes ever more complicated, not less so.

*A Story of Expanding Markets and
Increasing Marketing Efficiency*

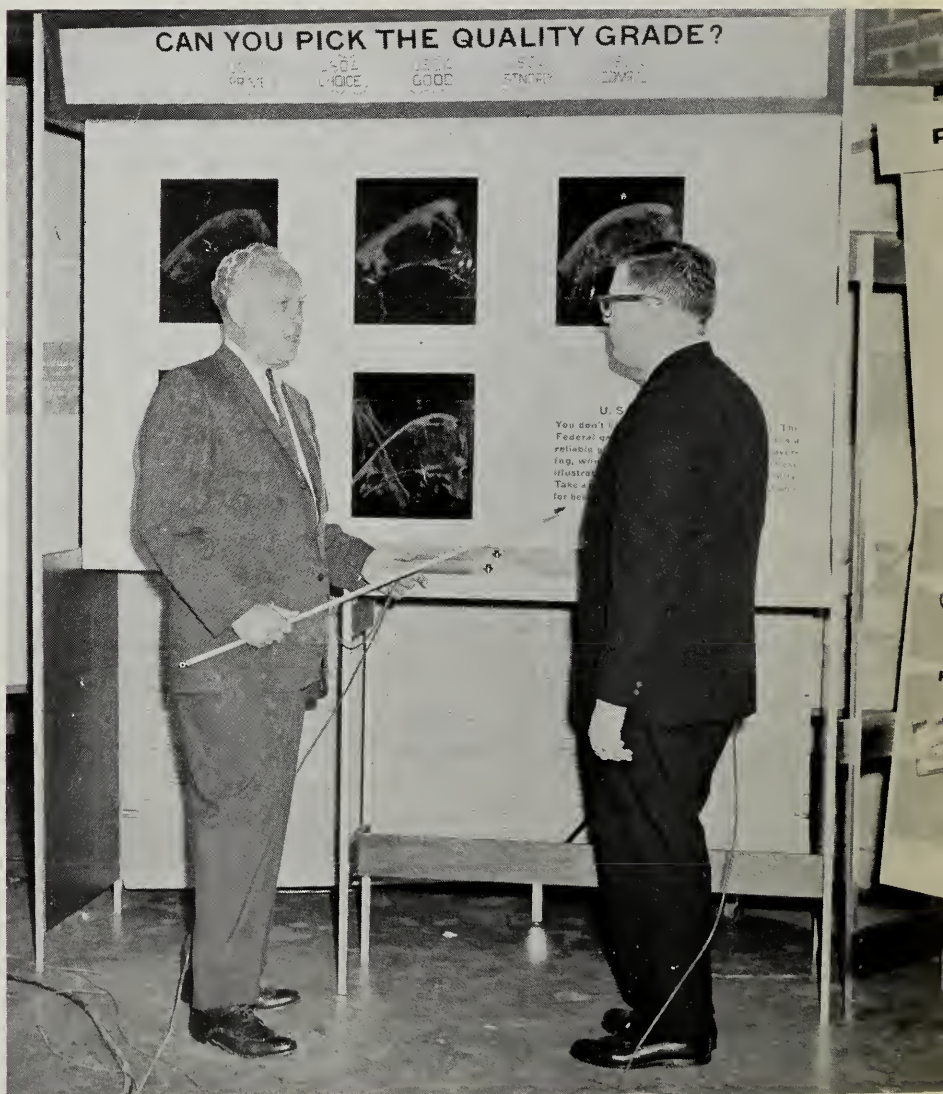
AMS Activities Taped For TV

FOR one full month (May 21-June 21) the story of fifty years of marketing services in the U.S. Department of Agriculture was told in exhibits housed in the USDA Patio in Washington, D. C. That story has now been put on video-tape and will be available to television stations around the Nation.

A total of 23 different tapes, ranging in length from 20 seconds to 5 minutes, depicts work of the USDA's Agricultural Marketing Service in expanding markets for farm products and making marketing more efficient. This marketing system annually moves and processes 135 million tons of foodstuffs worth more than \$60 billion. It also costs us 66 cents of every dollar we spend for food and fiber.

Here are the titles of the 23 tapes, which will be released over a period of several months: Polyethylene Packaging, Discovery of Ethylene Oxide, Mobile Poultry Lab, Seed Marketing Research, Assuring Good Seed, Wheat Sedimentation Test, Low Temperature Damage, Poly-bag Carrots, Direct Distribution of Food, Regulatory Activities, Focus on Quality, Data For Decision, Transportation and Facilities Research, Automated Meat Room, Broiler-Fryers Are Plentiful, Summer Turkey Festival, August Is Sandwich Month, The Food Stamp Program, Marketing Research, Packaging, the National School Lunch Program, Grading Poultry and Eggs, and Meat Grading.

Examples of the various AMS activities taped are provided in this photo story.



At left, Secretary of Agriculture Orville L. Freeman reminds his audience that marketing is a nerve center of the agriculture-and-food portion of United States' national economy.

Bottom left, Roy Lennartson (left), Associate Administrator, Agricultural Marketing Service, explains AMS's inspection and grading services.

Top right, Clarence H. Girard (left), Deputy AMS Administrator for Regulatory Programs, and Dennis Avery discuss the role of regulatory and related marketing services of AMS.

Donald A. Campbell, Director, Packers and Stockyards Division, explains how consumer is protected from monopolistic practices.



PACKERS AND STOCKYARDS ACT...

Provides fair play from producer to consumer in marketing livestock, poultry, and meat.

Accurate weights

Honest practices

Open competition

Fair charges

Financial protection

Claim settlements



Producer

Terminal
Stockyards
Direct
Sales
Auction
Markets



Packer

Wholesaling
Processing
Retailing

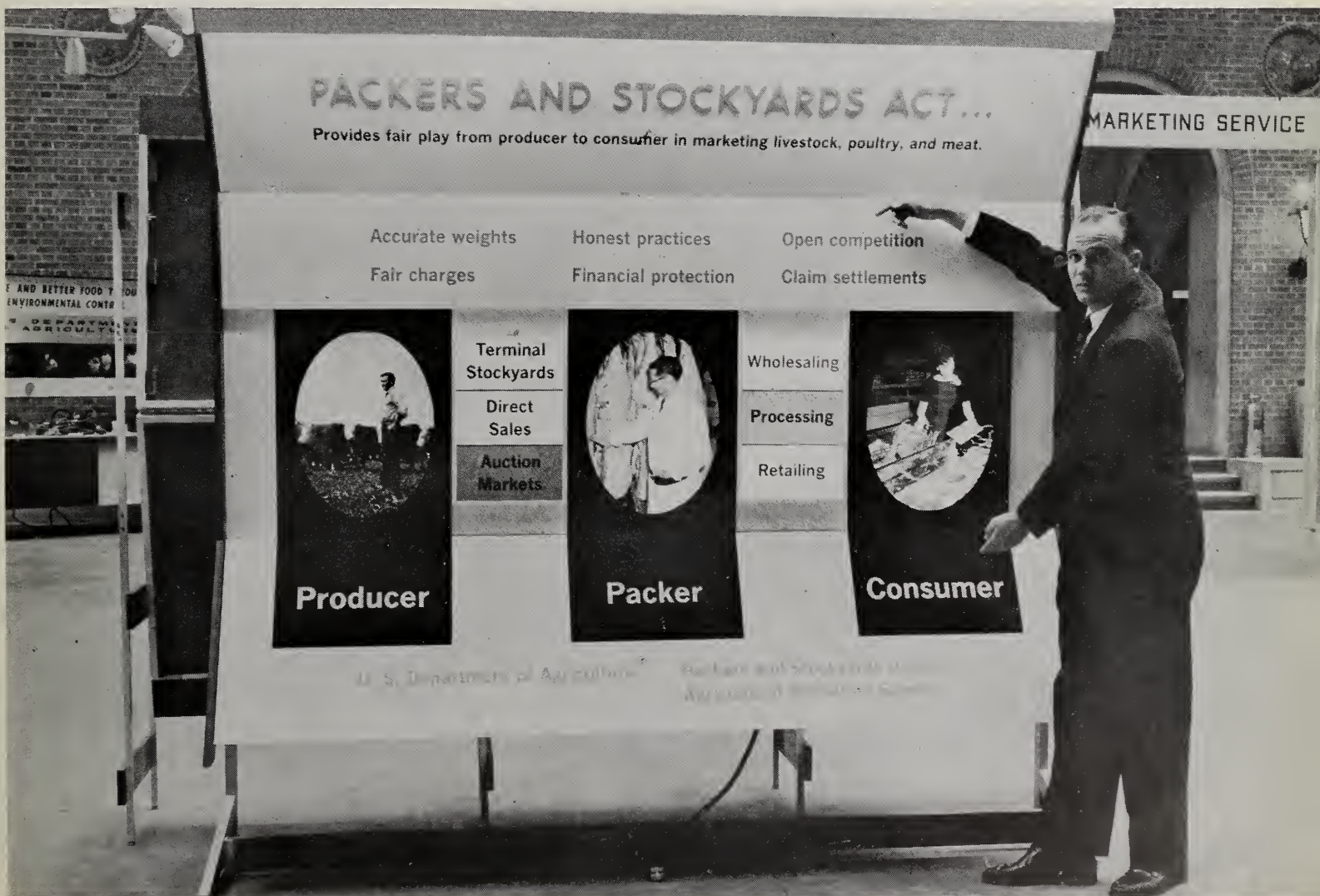


Consumer

U. S. Department of Agriculture

Packers and Stockyards Division
Agricultural Marketing Service

MARKETING SERVICE





Secretary of Agriculture Orville L. Freeman and AMS Administrator S. R. Smith open exhibit commemorating 50 years of marketing service by the U. S. Department of Agriculture to American farmers, industry and consumers.

Below, Pete Keay of AMS's Marketing Information Division (holding carrots) interviews Omer W. Herrmann, Deputy Administrator for Marketing Research, on work being done to get farm products to the consumer in top condition.

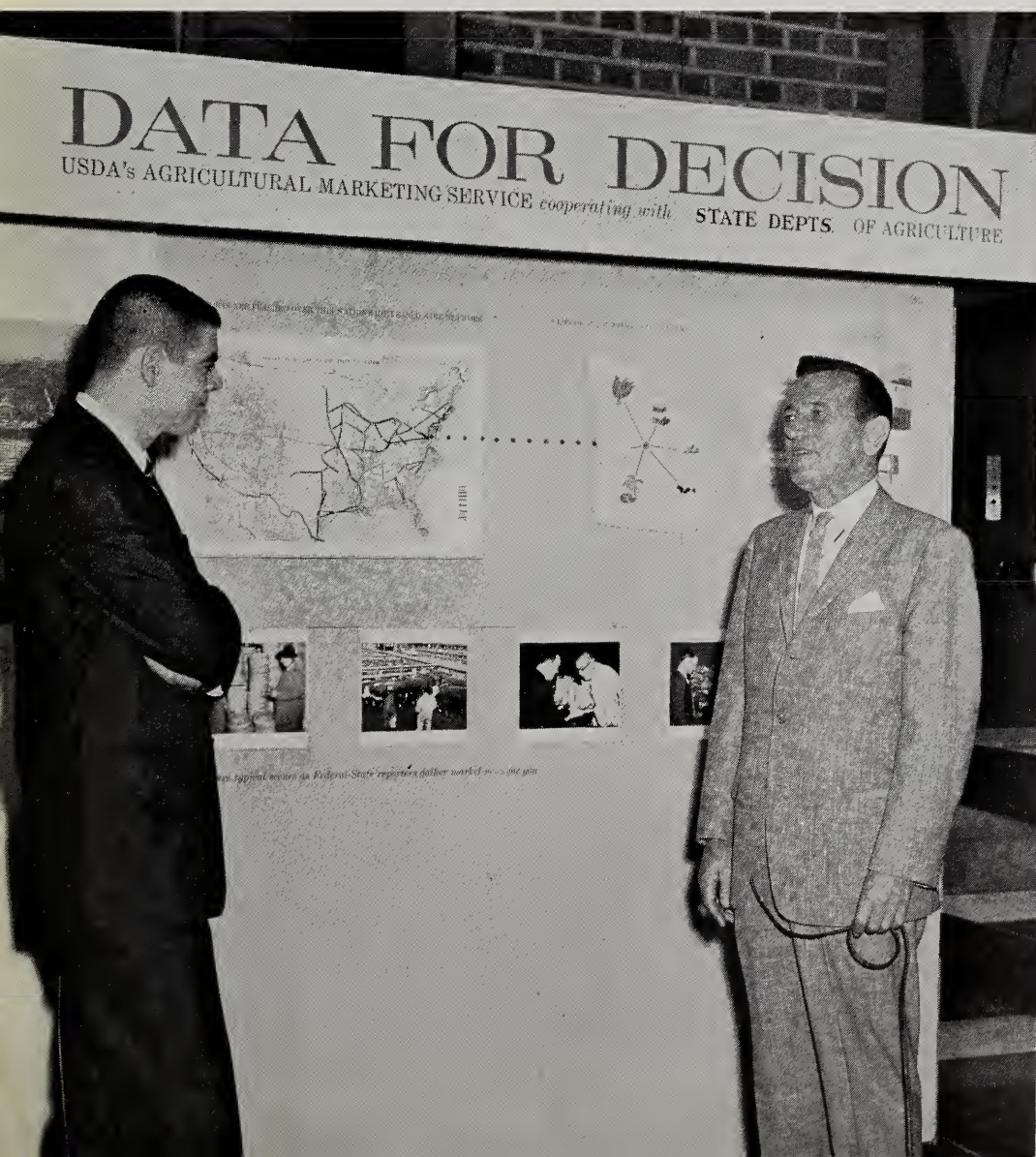




Howard P. Davis, at left, Director of Food Distribution Division, AMS, tells Pete Keay of AMS programs designed to improve our national dietary levels and to expand current and future markets for food.

Standing in front of the "Data for Decision" exhibit, George R. Grange, right, Deputy Administrator for Marketing Services, AMS, explains to Bill Bloom, how market news services collect and disseminate supply and price information to the thousands of interests which make up the marketing family.

Jeanette Lanciaux, Miss USDA for 1962 studies the different grades of tobacco.



A New Move In Meat Marketing

Central Packaging



TWELVE years of marketing research by USDA's Agricultural Marketing Service and other organizations has brought substantial improvement in the efficiency of self-service meat departments of retail food stores.

However, most of this work has been aimed at processing of meat into retail cuts in a back room of each store. Now, AMS researchers are studying the processing of retail meat cuts in a central plant serving numerous retail stores.

Preliminary studies show that such a firm with a yearly volume of \$13 million, serving 40 stores, can save as much as half of the total cost of operating an individual department in each store. Savings in the meat department represent a large overall marketing gain, since more than a fourth of retail food handling costs arise there. Meat sales also represent a fourth of total retail food store sales—the total was about \$58 billion in 1962.

A number of U.S. firms have tried central meat processing before but, for the most part, have been unsuccessful. Short shelf life and discoloration of the meat brought the most trouble, but also poor production planning resulted in faulty estimates of possible sales which often left unsalable meat in the stores.

However, several grocery items—luncheon meats, produce, and bakery goods—now are centrally packaged for retail sale. Several corporate chains and voluntary group wholesalers cut carcasses into wholesale cuts, bone rough cuts, and carry on the ground meat operation in centralized plants. Several firms in England currently

package and distribute retail meat cuts from central plants. One English company supplies \$100,000 of fresh meat to 30 stores each week.

AMS researchers in 1955 studied the distribution of prepackaged frozen meat cuts. At that time, they concluded that freezing wasn't necessary for a centralized operation. In addition, handling costs for frozen meat were high, and many consumers didn't accept the frozen product.

In the present study, the researchers turned their attention to U.S. firms now using central processing on a limited scale. Most of these processed meat for stores that were too small to profitably package their own fresh meat. Many of the stores had weekly meat sales of \$200 to \$1,500, although a few sold as much as \$10,000 to \$12,000 of meat a week.

The research report, being prepared for publication, projects the savings of these small central plants to larger ones. The researchers state that central processing can save thousands of dollars—if a tight planning and control system is used.

First, the central plant must accurately determine the volume of daily retail sales of packaged meat for each store served so an excess is not delivered that will not be sold. Second, the plant must effectively schedule meat delivery and labor and equipment use. Then, a plant manager can plan each operation so the product is in the store display cases when it is needed.

With proper sanitation and temperature control (the researchers give recommendations), packaged retail cuts

of fresh meat can have a shelf life of 2 to 5 days. This shelf life—combined with efficient production planning and control—can make central processing possible.

The cost advantages inherent in a central system make the large dollar savings possible. For example, equipment that was not fully utilized in a single store can now be used to full capacity. Eliminating the meat processing space allows retail stores to reduce backroom space which then can be used for other needed purposes. Also, land and building costs can be reduced because the central plant doesn't have to be built in a high-cost shopping area. A central plant can have work rooms designed for production only, making them more efficient than those in a retail store. Also, more specialization of labor allows workers to be used more efficiently.

Further price advantages are possible because packaging material suppliers and meat packers give larger discounts on fewer and larger-volume deliveries to a single plant. Higher prices also are possible for byproducts such as meat scraps and bones, since a buyer can collect them at a lower cost. In some areas, these byproducts sell from 1 to 2 cents a pound higher than they would from retail stores.

A big advantage is that different retail cuts can be distributed to the market where they are most in demand. Under the present system, carcasses or wholesale cuts are shipped to a store to be cut up. Then there is often an excess of some cuts and a shortage of others.

Some further advantages of central processing are (1) more uniform cutting, resulting in standardization of cuts, (2) central control of ordering and inventories, which controls overhead costs and maximum sales (3) controlling of cutting methods and of the types of cuts offered for sale, allowing meats to be cut specially for a promotion or to fill a particular need, and (4) meat packages are ready for sale as soon as they are delivered from the central plant.

Although daily deliveries could cause delivery costs to be higher than those of shipping carcasses or wholesale cuts of meat, some delivery costs are eliminated because different wholesale suppliers would no longer deliver to the same store.

Such a plant could be located apart from all of the retail stores, and in a centralized location, or, if the plant serviced only a few stores and could not justify a separate building, it could be centered either in an existing retail store or in one soon to be built.

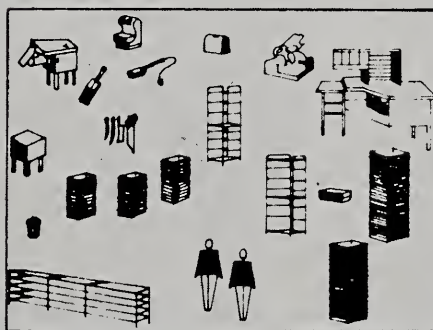
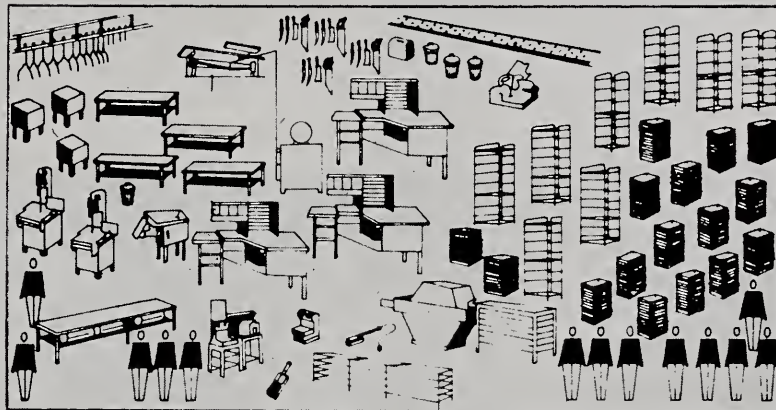
The study was conducted by Marvin D. Volz and James A. Marsden, industrial engineers for the Wholesaling and Retailing Research Branch, AMS.

They point out that the results will be revised and refined when more information is available. And, they warn that central packaging should not be installed unless good management and competent personnel are available.

(The author, James E. Grunig, is a senior at Iowa State University. At the time this article was written, Mr. Grunig was a student assistant in the Marketing Information Division, AMS.)

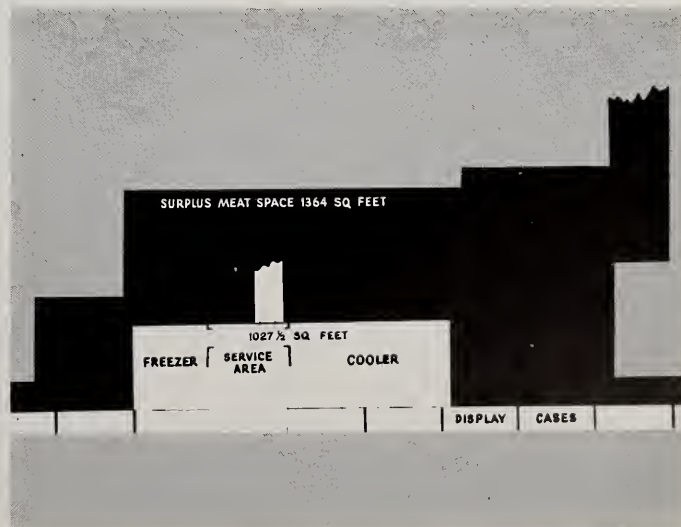
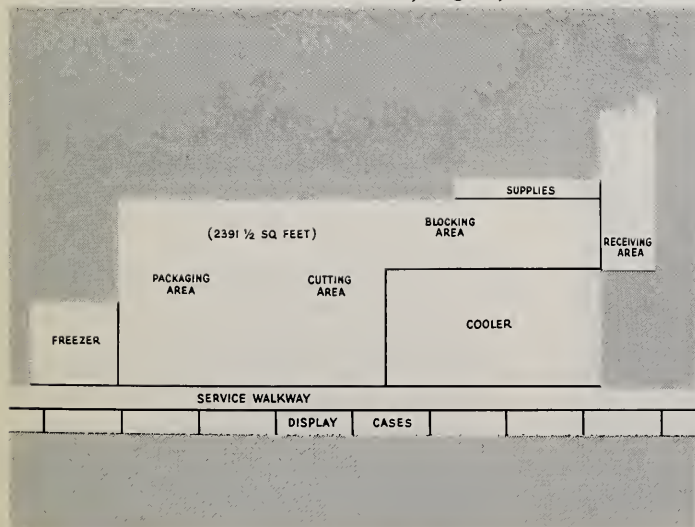
RESEARCH ON
CENTRAL PACKAGING OF MEAT PRODUCES SAVINGS OF
\$10,000 PER STORE IN EQUIPMENT COST
\$35,000 PER YEAR PER STORE IN LABOR
50% OF SPACE REQUIRED IN BACKROOM

EQUIPMENT NEEDED TO PACKAGE MEAT IN BACKROOM OF RETAIL STORE



EQUIPMENT NEEDED IN BACKROOM WHEN MEAT IS PACKAGED BEFORE RECEIPT

Above, the two drawings show retail food stores can realize large savings in labor and equipment when retail cuts of meat are packaged at a central plant serving several stores rather than in a backroom of each store. Below, food stores using central meat processing also can free much backroom space for other uses as shown in the contrasting diagrams. The typical backroom meat department, left, is reduced to the small white area, right, when central processing is used.

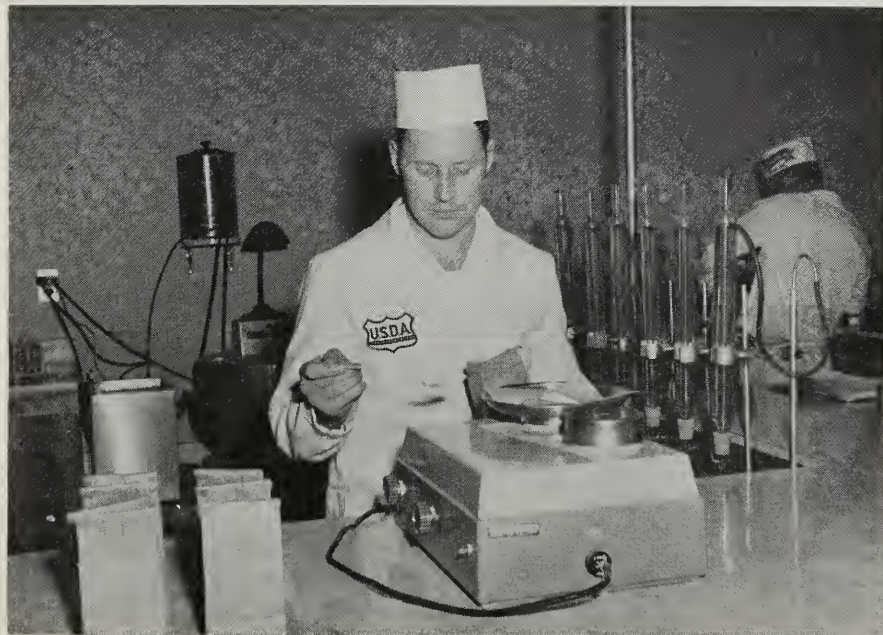


CHANGING MARKET

Controlling Quality In Dairy Foods



Inspector Earl Harvey draws sample of raw milk for bacteriological testing from producer cans at dairy manufacturing plant. Inspector Harry Krebs weighs samples of dry milk for analysis.



EVERY consumer is a connoisseur when it comes to eating dairy foods—because a slight miss in quality from one churn of butter to the next, one vat of cottage cheese to the next, or one vat of cultured sour cream to the next, can be so easily detected in its flavor, texture, or aroma.

High quality and stability, or keeping quality, are essential characteristics of dairy foods. Only through the application of strict quality control measures—from the time the milk is produced, to the time the finished products leave the dairy manufacturing plant on their way to market outlets—can high quality and stability be realized.

A quality control service, which USDA's Agricultural Marketing Service makes available to processors of dairy foods, helps plants in their efforts to manufacture products of the highest possible quality.

The service employs an impartial, uniform system of evaluating the quality of dairy products. This system, used nationwide, is based on established, well recognized U.S. standards for grades and product quality specifications.

A manufacturer interested in the quality control service applies to the Dairy Division of the Agricultural Marketing Service. Dairy inspection and grading specialists then make an initial appraisal of the plant's facilities, equipment, practices of maintaining sanitation, and the quality of the raw milk supply.

An adequately equipped laboratory is an essential part of an approved plant. Bacteriological and composition tests are necessary control checks to assure top quality products meeting grade or quality standards.

A dairy products inspector of the Agricultural Marketing Service's Dairy Division is assigned to an approved

plant on a full-time, resident basis. The inspector, who is qualified and specially trained for the work, offers continual technical assistance to the plant's management, and he evaluates the quality of the product throughout its manufacture. He grades products in bulk packages and issues certificates for use in commercial trading.

The inspector's own know-how is backed up, too, by experience and technical knowledge of dairy specialists of AMS and by the Dairy Division's field laboratories in Chicago, Ill., and Syracuse, N.Y.

The approved plant may pack its certified product in consumer-sized packages identified with the official USDA grade or quality shield. Depending on

the product on which it appears, the shield may designate the quality grade, or it may read "Quality Approved" and contain the statement, "U.S. Department of Agriculture Grading and Quality Control Service."

Manufacturers whose products earn the shield—as well as distributors—are finding that this shield is a definite complement to their brand name.

And consumers of dairy foods are becoming not only increasingly quality conscious, but increasingly aware of the quality that's assured by the USDA shield.

(The author, J. A. Rubis, is assistant chief, Inspection and Grading Branch, Dairy Division, Agricultural Marketing Service.)



1962 Agricultural Statistics Available

"Agricultural Statistics, 1962" the annual statistical yearbook, was issued recently by the U.S. Department of Agriculture. This edition provides a more complete reference than any other recent issue, with some tables dating back to 1866. It reflects revisions made in various series resulting from review of the 1959 census of agriculture.

Subjects covered include statistics on agricultural products, production, prices, supplies, costs, income, land use, farm ownership, farmworkers, food consumption, and related subjects. There are also statistics on weather, freight rates, refrigerated warehouse storage, fisheries, forestry, world crops, and foreign trade in agriculture.

The data are grouped in 11 chapters and each table carries a reference to the agency supplying the data, for further reference and additional material. "Agricultural Statistics, 1962," is available for \$2.00 from the Superintendent of Documents, U.S. Government Printing Office, Washington 25 D. C.

Strawberries Fly to Market

Strawberries are flying to market these days—and the Federal-State Market News Service, administered by the Department of Agriculture's Agricultural Marketing Service, has added its first daily air shipments report to cover this newly important method of strawberry marketing.

Air shipments of California strawberries last year jumped suddenly from a predicted 75 carlots to more than 200 carlots. This meant that about 4

percent of the total interstate movement of California strawberries was being shipped by air. Likewise, the movement of Florida strawberries by air is on the increase.

To give the industry a complete picture of strawberry marketing, the San Francisco office of the Market News Service has added daily air shipments of California strawberries to its daily strawberry report.

Strawberries lend themselves better

to air transportation than any other important fruit or vegetable. They are highly perishable, widely popular. And often bring high prices—so that the difference between surface and air transportation costs becomes a smaller percentage of the total cost.

The Market News Service plans to make national dissemination of data on strawberry air shipments and unloads when arrangements have been made with the airlines for complete reports.

Emergency Food Management

USDA's Agricultural Marketing Service recently issued a pamphlet containing information essential to planning for food management in case of national emergency.

"Food Management in a National Emergency—A Guide for Processors

and Wholesalers" (PA-572) outlines the major assumptions underlying emergency food management, points out the industrial and governmental responsibilities, and keynotes objectives that must be achieved. In short, it deals with problems the Nation may

face in the conservation, processing, storing, and distribution of food after a nuclear attack.

Copies of the pamphlet can be obtained from the Office of Information, U.S. Department of Agriculture, Washington 25, D. C.

Inspectors Return To School

The tall, graying man strode confidently to the speaker's platform, took a fresh peach from his pocket, and rolled it—hard—across the floor of the meeting room. His startled audience blinked as the green peach bounced off the far wall of the room. "That, gentlemen, was an immature peach. Immaturity is a serious defect, and you must score heavily against it." The speaker then went on to give a 25-minute lesson on inspecting peaches that held his listeners on the edges of their seats.

Just five days before, this same speaker had barely been able to get stiffly through a five-minute speech on peach inspection.

The difference? He and the 20 men in his audience were finishing up a week-long training course for instructors that was specifically designed to improve their teaching ability. They were all key supervisors and inspectors in the Federal-State Inspection Service, operated jointly by the USDA's Agricultural Marketing Service and State departments of agriculture. In their jobs, these men are responsible for much of the training for the approximately 3,800 Federal and State-employed inspectors who provide official grading service on fresh fruits and vegetables throughout the country.

Good training is vital to the Federal-State Inspection Service. Regular refresher courses are given to keep grade interpretations standardized across the country; training courses keep the inspectors up-to-date on changes in the grades and changes in production and marketing techniques that pose new inspection problems. In addition, the Service must train several hundred new inspectors each year.

The key supervisors responsible for this training are experts in inspection—but not necessarily expert teachers. The training course for instructors was

designed by AMS' Fruit and Vegetable Division to improve the teaching skills of these key instructors. Much of the course material was drawn from an instructor's course conducted by the U.S. Army Engineers School at Ft. Belvoir, Va.

The course lasts a week—and many of its graduates say they've never worked harder during one week in their lives. The course generates so much enthusiasm that after a solid 8-hour day of classroom work, students often stay up until the wee hours of the morning working on their assignments for the following day. One inspector turned in a time report for the week that listed 40 hours in the classroom, 40 hours on homework, 13 hours eating and 11 hours sleeping!

Monday morning begins with each man introducing himself to the group. This not only gets everyone introduced, but also gets each man onto his feet and talking before an audience.

After an orientation session the course swings right into its first lecture, on the psychology of learning. Other classes will follow during the week on such basic instructional tools as voice development, using audio-visual aids, lesson plans, group teaching methods, and how to handle "problem students."

The students also practice teaching four different lessons on the same subject. The first lesson is 5 minutes long; the second and third are 15 minutes long; and the "final exam" is the 25-minute lesson. Each speaker is rated on his performance, not only by the instructors but also by each of the other students. The talks are tape-recorded, and played back for the student so he can hear his own performance.

The full schedule is followed with military precision—50 minutes for each class, followed by a 10-minute break. There's no smoking, and students stand when they speak. The whole idea is to

create the best possible climate for learning. This, too, is part of the lesson the student instructors must learn.

The main emphasis of the course is on developing real communication between instructor and students, motivating the students to learn, and then presenting the material in a well-organized way so the students can grasp it readily.

Graduates of the course have been vocally enthusiastic:

"I gained more in the past five days, more workable knowledge, than I have ever gained in the same time before in my life."

"Among other things you have proved to me is the fact I won't drop dead from fear if I stand up and speak up."

"Just a coincidence—the Potato Association has asked us to put on a training class for shippers next month. I'll be prepared."

"Emphasis, Preparation, Repetition! Why are we here? Have we taught? Has our class learned? Prepare your material, have a lesson plan, follow it! These classes were alive, informative, and developed self confidence for speaking that I did not know was in me."

The Federal-State Inspection Service started the program last year, and will windup the current phase this fall with its fifth training school, for inspectors in the Northeast. After that, these schools will be repeated periodically around the country as the need arises.

The payoff, of course, is in more effective training for the inspectors. One graduate made what has become a typical comment: "We're now getting as much information across to our inspectors in one day's training as we used to do in two or three days." That means less training time used, better-trained inspectors, and a more effective inspection service for the fruit and vegetable industry.